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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,371	03/07/2001	Raymond Kaempfer	A34084 PCT USA-A	9946

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EXAMINER
WHITEMAN, BRIAN A

ART UNIT	PAPER NUMBER
1635	

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/801,371	KAEMPFER ET AL.	
	Examiner	Art Unit	
	Brian Whiteman	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/15/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-20,22-31 and 47-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-20,23-31* is/are rejected.

7)☒ Claim(s) *22 and 47-49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Non-Final Rejection

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/15/04 has been entered.

Claims 1, 4-20, 22-31, and 47-49 are pending.

Applicants' traversal, the amendment to claims 1, 4, 5, 7, 8, 9, 10, 22, 23, 24, 27, 28, 47, 48 and 49, and the cancellation of claims 2 and 21 in paper filed on 1/15/04 is acknowledged and considered.

Claim Objections

Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 depends on claim 14. Claim 14 is directed to the human TNF-α gene. Claim 22 recites inserting a cis-acting element into the intron of the human TNF-α gene. However, the human TNF-alpha gene already has a cis-acting nucleotide in an exon (3'UTR) of said gene but not in an intron. If the cis-acting element is inserted into an intron of

the human TNF-alpha gene than it is no longer the human TNF-alpha gene. Thus, claim 22 does not further limit the subject matter of claim 14; it is outside its scope.

Applicant's arguments filed 1/15/04 have been fully considered but they are not persuasive because applicants did not address the objection, instead applicants amended the claim to read on claim 14 instead of claim 21 (Claim 22 was already dependent on claim 14 because claim 22 was dependent on claim 21, which was dependent on claim 14).

Claims 47-49 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 47-49 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4-20, and 23-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 4-20, and 23-31, as best understood, are readable on a genus of a cis-acting nucleotide sequence, wherein the genus of sequences capable of rendering the removal of introns from a precursor transcript encoded by a gene, is not claimed in a specific biochemical or

molecule structure that could be envisioned by one skilled in the art at the time the invention was made.

The specification described a cis-acting nucleic sequence, which is set forth in SEQ ID NO: 1 and forms a stable, 5'proximal 48-nt stem-loop containing 17 base pairs set forth in SEQ ID NO: 2 (Table 1). Furthermore, the as-filed specification contemplates biological functional fragments, derivatives, mutants and homologues of the nucleotide sequence as denoted by SEQ ID NO: 1 or SEQ ID NO: 2. The disclosure provides sufficient description for SEQ ID NO: 1 and SEQ ID NO: 2. However, the as-filed specification does not provide sufficient description of a genus of cis-acting nucleotide sequence.

The as-filed specification does not provide an adequate written description of a representative number of species of cis-acting nucleotide sequence. The description is considered essential and is required for an adequate description of a representative number of species as embraced by the claimed genus of cis-acting nucleotide sequence because the description is neither described sufficiently in the specification nor conventional in the prior art. A mere statement asserting that any sequence that is a biological functional fragment, derivative, mutant and homologue of the nucleotide sequence as denoted by SEQ ID NO: 1 or SEQ ID NO: 2, without providing the essential and specific description of a representative number of species embraced by the claimed genus does not lend evidentiary support for a skilled artisan to have recognized that applicants were in possession of the genus of cis-acting nucleotide sequence as claimed, particularly since the description of a sufficient number of nucleotide sequences of a generic cis-acting nucleotide sequence is lacking from the as-filed specification and since the skill and knowledge in the art is not adequate or conventional to determine the representative

number of species of cis-acting nucleotide sequence or nucleic acids on the basis of the only disclosure of SEQ ID NO: 1 and SEQ ID NO: 2.

Finally, University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 held that:

> …To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (1997): *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) ("[T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement 'by describing the invention, with al it claimed limitations, not that which make it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc. that set forth the claimed invention." *Lockwood*, 107F.3d at 1572, 41 USPQ2d at 1966.
>
> An adequate written description of a DNA, such as the cDNA of the recombinant plasmid and microorganisms of the '525 patent, "requires a precise definition, such as by structure, formula, chemical name, or physical properties," not a mere wish or plan for obtaining the claimed chemical invention. *Fiers v. Revel*, 984F.2d 1164, 1171, 25 USPQ2d 1601, 1606 (Fed. Dir. 1993). Accordingly, "an adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it; what is required is a description of the DNA itself." Id. At 1170, 25 USPQ at 1606.
>
> The name cDNA is not itself a written description of that DNA; it conveys no distinguishing information, concerning its identity. While the example provides a process for obtaining human insulin-encoding cDNA, there is not further information in the patent pertaining to that cDNA's relevant structural or physical characteristics; in other words, it thus does not describe human insulin cDNA. Describing a method of preparing a cDNA or even describing the protein that the cDNA encodes; as the example does, does not necessarily describe the cDNA itself. No sequence information indication which nucleotides constitute human cDNA appears in the patent, as appears for rat cDNA in Example 5 of the patent. Accordingly, the specification does not provide a written description of the invention of claim 5.

The guidance in the specification is not sufficient to support the present claimed invention directed to the genus of cis-acting nucleotide sequence. The claimed invention as a

whole is not adequately described if the claims require essential or critical elements, which are not adequately described in the specification and which is not conventional in the art as of applicant's effective filing date. Claiming a genus of cis-acting nucleotide sequence that must possess the biological properties as contemplated by applicant's disclosure without defining what means will do so is not in compliance with the written description requirement. Rather, it is an attempt to preempt the future before it has arrived. (See *Fiers v. Revel*, 25 USPQ2d 1601 (CA FC 1993) and *Regents of the Univ. Calif. v. Eli Lilly & Co.*, 43 USPQ2d 1398 (CA FC, 1997)). Possession may be shown by actual reduction to practice, clear depiction of the invention in a detailed drawing, or by describing the invention with sufficient relevant identifying characteristics such that a person skilled in the art would recognize that the inventor had possession of the claimed invention. Pfaff v. Wells Electronics, Inc., 48 USPQ2d 1641, 1646 (1998). The skilled artisan cannot envision the detailed structure of a genus of cis-acting nucleotide sequence that must exhibit the contemplated biological functions, and therefore, conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the structures and/or methods disclosed in the as-filed specification. Thus, in view of the reasons set forth above, one skilled in the art at the time the invention was made would not have recognized that applicant was in possession of the claimed invention as presently claimed.

Applicant's arguments filed 1/15/04 have been fully considered but they are not persuasive.

With respect to applicants' argument that the amendment to claims 1 and 7 to recite subject matter of the cis-acting element to consist essentially of the sequences of SEQ ID NOs: 1

and 2 and these amendment should be sufficient in overcoming the written description rejection, the argument is not found persuasive because the specification does not provide sufficient description of a genus of cis-acting nucleotide sequence consisting of biologically fragments, derivatives, mutants, and homologues.

Claims 1, 4-20, and 23-31 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a cis-acting nucleotide sequence comprising the 3' untranslated region of the human tumor necrosis factor alpha gene set forth in SEQ ID NO: 1 or consisting of SEQ ID NO: 2, which removes intron(s) from a pre-cursor transcript encoded by a gene, wherein said gene comprises at least one of said cis-acting nucleotide sequence and is dependent upon activation of a trans-acting factor, wherein said trans-acting factor is the RNA-activated protein kinase (PKR), which phosphorylates the alpha subunit of eukaryotic initiation factor 2 (eIF2), and does not reasonably provide enablement for a cis-acting nucleotide sequence which is capable of rendering the removal of introns from a precursor transcript encoded by any gene, which harbors such cis-acting nucleotide sequence, occurring the production of mRNA of said gene, dependent upon activation of a trans-acting factor, wherein said trans-acting factor being the RNA-activated protein kinase (PKR) which is capable of phosphorylating the alpha subunit of EIF-2 and nucleotide selected from the group consisting of biologically active fragments, derivatives, mutants, and homologues of the nucleotide sequence denoted by SEQ ID NO: 1 or SEQ ID NO: 2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

> Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in In re Wands, 858 F.2d 731, 8USPQ2d 1400 (Fed. Cir. 1988). They include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

Specifically, since the claimed invention is not supported by a sufficient description (for possessing a genus of cis-acting nucleotide sequence) as recited in the claims, particularly in view of the reasons set forth above, one skilled in the art would not have known how to make and use the claimed invention so that it would operate as intended, e.g. capable of rendering the removal of intron(s) from a pre-cursor transcript encoded by a gene.

The claimed invention encompasses modulating gene expression using a cis-acting nucleotide sequence, which renders the removal of introns from pre-cursor transcript encoded by a gene of interest. The field of the invention lies in nucleotide sequences that could be used as cis-acting nucleotide sequence, e.g. TNF-alpha 3'UTR.

The as-filed specification teaches that the cis-acting element in the human TNF-alpha 3'UTR renders splicing of TNF-alpha mRNA sensitive to inhibition by 2-Aminopurine (AP), and contemplates that this is a unique and novel tool for bringing expression of a desired gene under the control of this mechanism. The state of the art exemplified by Jarrous teaches a method of regulating gene expression at the mRNA level transforming a host cell with a vector comprising the TNF-alpha gene, including the 3' untranslated region, wherein the activity of the RNA activated eIF2alphakinase in the host cells is modulated by the use of 2-AP (IDS, page 2820, column 1, lines 5-24). Jarrous further teaches that:

> Most likely, regulation by 2-AP is mediated through a particular sequence within the TNF-alpha primary transcript to produce general inhibition of the splicing of this transcript (page 2821).

> Deletion of a particular sequence from the TNF-alpha gene renders splicing of the encoded pre-cursor transcripts resistant to inhibition by 2-AP, while introduction of said sequence into the TNF-beta shifts inhibitory effect of 2-AP on the TNF-beta gene expression from transcription to splicing (page 2821).

The as-filed specification locates the sequence through genetic techniques that Jarrous speculates about in the TNF gene (see pages 26-41).

In view of the In re Wands Factors, the claimed invention is only enabled for cis-acting nucleotide sequence set forth in SEQ ID NO: 1 and SEQ ID NO: 2 and is not enabled for the full breath of the claimed invention. The claimed invention is broader (biologically functional fragments, derivatives, mutants and homologues of the nucleotide sequence as denoted by SEQ ID NO: 1 or SEQ ID NO: 2) than the enabling disclosure because there is no guidance as to which amino acids of the nucleotide sequence set forth in SEQ ID NO: 1 or 2 may be changed while cis-acting activity is retained. The state of the art (IDS, Jarrous et al., Molecular and Cellular Biology, Vol. 16, 1996, 2814-2822) teaches that two genes (TNF-beta and IL-1beta) have a similar sequence to TNF alpha and do not show that 2-AP blocks their mRNA unlike TNF-alpha (page 2814). In view of the art of record, it would require undue experimentation for one skilled in the art to arrive at other sequences that are cis-acting nucleotide sequences. In Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016 (Fed. Cir. 1991), the court ruled that a claim to a large genus of possible genetic sequences with a particular function that needs to be determined subsequence to the construction of the sequences may not find sufficient support under 35 U.S.C. 112, first paragraph, if only a few of the sequences that meet the functional limitation of the claim are disclosed and if undue experimentation would be required

for one skilled in the art for the determination of other sequences that are embraced by the claims. If it would require undue experimentation to identify other sequences that have cis-acting activity, it certainly would require undue experimentation to make the genus of cis-acting nucleotide sequences. This is the case here. Therefore, it would be reasonable to conclude that it would require undue experimentation to make the entire scope of the claimed invention.

In conclusion, in view of the In Re Wands Factors, the claimed invention is only enabled for a cis-acting nucleotide sequence comprising the 3' untranslated region of the human tumor necrosis factor alpha gene set forth in SEQ ID NO: 1 or consisting of SEQ ID NO: 2, which removes intron(s) from a pre-cursor transcript encoded by a gene, wherein said gene comprises at least one of said cis-acting nucleotide sequence and is dependent upon activation of a trans-acting factor, wherein said trans-acting factor is the RNA-activated protein kinase (PKR), which capable of phosphorylating the alpha subunit of eukaryotic initiation factor 2 (eIF2)and not for the full scope of the claimed embodiment. It is not apparent how one skilled in the art can make and use a genus of cis-acting nucleotide sequences, given that unpredictability of identifying a cis-acting nucleotide with the claimed limitations and the lack of guidance provided by the specification. Therefore, one skilled in the art would have to engage in a large quantity of experimentation in order to practice the claimed invention based on the applicants' disclosure and the unpredictability of reasonably extrapolate from SEQ ID NO: 1 or 2 to the claimed genus of cis-acting nucleotide sequences.

Applicant's arguments filed 1/15/04 have been fully considered but they are not persuasive.

With respect to applicants' argument that the amendment to claims 4, 5, 8, and 9 have been amended to delete complementary nucleotide sequences, the argument is not found persuasive because the specification does not provide sufficient guidance and/or factual evidence for one skilled in the to make and use a genus of cis-acting nucleotide sequence consisting of biologically fragments, derivatives, mutants, and homologues. Applicants did not address the entire 112 first paragraph rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-6 remain rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al., (GenBank Accession No. T29839, US National Library of Medicine, Bethesda, MD, Sept. 6, 1995, accessed by PTO on 7/9/03.). Adams teaches a nucleotide sequence (248 base pairs, dbEST ID: T29839) with 99.0% identity to SEQ ID NO: 1 and 100% identity to SEQ ID NO: 2. At base pair 122 of the sequence taught by Adams there is a N that makes the sequence 99.0% identically to SEQ ID NO: 1. However, N could be any nucleotide (A, G, C, or T) and that would make one of the four possible sequences 100% identical to SEQ ID NO: 1.

Applicant's arguments filed 1/15/04 have been fully considered but they are not persuasive.

The claims do not exclude the nucleotide sequence taught by Adams. The applicants **have not provided factual evidence** that the human TNF-alpha gene used by Adams does not encode a 3' UTR region. See MPEP § 716.01(c). One skilled in the art would understand that the TNF-alpha gene contains a 3' UTR (See Alberts et al., Molecular Biology of the Cell, 3rd edition, Garland Publishing, New York, 1994, Figure 9-84).

In addition, with respect to the argument that Adams does not teach the cis-acting nucleotide sequence located in the 3'UTR of the human TNF-alpha gene, MPEP 2112 states, **"The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977)."** This is the case here. Adams teaches the claimed invention and the claimed sequence does not exclude the nucleotide sequence taught by Adams.

Furthermore, MPEP 2111.03 states:

> **For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355.**

Since the claims and the specification do not indicate what the basic and novel characteristics are for the claims, the term "consisting essentially of" is the equivalent of "comprising". There is no evidence in the specification or claims that the presence of sequences from the TNF alpha other than the cis-acting sequences would materially affect the basic and novel characteristic of the claimed isolated nucleotide sequence. Therefore, the sequence taught by Adams anticipates the claims.

Claims 7-9, 11, 13, 14, 23, 24, 25, 27, 28, 29, 30, and 31 remain and claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Jarrous et al. (IDS, Mol. Cell. Biol., Vol. 16, 1996, pp. 2184-2822). Jarrous discloses a vector comprising the TNF-alpha gene including the 3' untranslated region (UTR) and regulatory sequence, which reads on a cis-acting nucleotide sequence of the present application a carrier (salmon sperm) and a primary lymphoid cell line transfected with said vector (see pages 2814, 2817, and 2820). Jarrous further teaches that the trans-acting factor for the sequence is PKR (page 2814).

Applicants' arguments filed 1/15/04 have been fully considered but they are not persuasive.

The claims read on the vector taught by Jarrous. The claims do not exclude the vector taught by Jarrous. The applicants have not provided factual evidence that the human TNF-alpha gene used by Jarrous does not encode a 3' UTR region. One skilled in the art would understand that the TNF-alpha gene contains a 3' UTR (See Alberts et al., Molecular Biology of the Cell, 3rd edition, Garland Publishing, New York, 1994, Figure 9-84).

In addition, with respect to the argument that Jarrous does not teach the cis-acting nucleotide sequence located in the 3'UTR of the human TNF-alpha gene, MPEP 2112 states, "The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977)." This is the case here. Jarrous teaches the claimed invention and the claimed DNA construct does not exclude the vector taught by Jarrous.

Furthermore, MPEP 2111.03 states:

For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355.

Since the claims and the specification do not indicate what the basic and novel characteristics are for the claims, the term "consisting essentially of" is the equivalent of "comprising". There is no evidence in the specification or claims that the presence of sequences from the TNF alpha other than the cis-acting sequences would materially affect the basic and novel characteristic of the claimed isolated nucleotide sequence. Therefore, the sequence taught by Jarrous anticipates the claims.

Response to Arguments

Applicant's arguments, filed 1/15/04, with respect to claim objections have been fully considered and are persuasive. The objection of claims 7, 10, 21, 23, 24, 27, 28, has been withdrawn because of the amendment to the claims and the cancellation of claim 21.

Applicant's arguments, filed 1/15/04, with respect to 112 second paragraph rejections have been fully considered and are persuasive. The rejection of claims 21 and 27 has been withdrawn because of the amendment to claim 27 and the cancellation of claim 21.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Whiteman whose telephone number is (571) 272-0764.

The examiner can normally be reached on Monday through Friday from 7:00 to 4:00 (Eastern Standard Time), with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, SPE - Art Unit 1635, can be reached at (571) 272-0760.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Brian Whiteman
Patent Examiner, Group 1635

SCOTT D. PRIEBE, PH.D
PRIMARY EXAMINER